

Amdt. dated April 20, 2004
Reply to Office action of Jan. 20, 2004

Serial No. 09/457,150
Docket No. BO999009
Firm No. 0036.0036

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for reconfiguring multiple logical printers from using a first monitor program to using a second monitor program to communicate with one physical printer, wherein the monitor ~~program submits~~ programs submit print jobs directed to a logical printer to one associated physical printer over a network, wherein at least one physical printer is capable of being associated with each logical printer, comprising:

determining a plurality of logical printers;

determining whether each physical printer associated with each of the plurality of logical printers is of a particular class;

indicating in a data structure each logical printer associated with one physical printer of the particular class; and

reconfiguring each of the plurality of logical printers indicated in the data structure to use the second monitor program to submit print jobs to one physical printer of the particular class.

2. (Original) The method of claim 1, further comprising determining a network address of each physical printer, wherein determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

3. (Original) The method of claim 1, wherein a port object provides an interface to a physical printer, wherein each logical printer is associated with one port object to interface with one physical printer, wherein the port monitor is associated with the port object, and wherein reconfiguring each of the plurality of logical printers to use the second monitor program comprises setting the logical printer to use one port object associated with the second port monitor to submit print jobs.

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4. (Original) The method of claim 3, further comprising determining a network address of each physical printer by processing a name of one port object associated with the first monitor program providing the connection between the physical printer and associated logical printer, wherein determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

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5. (Original) The method of claim 3, further comprising:
determining, for each logical printer, each port object associated with the logical printer, and wherein determining whether each physical printer is of a particular class comprises determining whether each physical printer associated with each determined port object is of the particular class.

6. (Original) The method of claim 3, wherein reconfiguring the plurality of logical printers comprises:
creating a new port associated with the second monitor program for each logical printer;
and
reconfiguring each of the logical printers indicated in the data structure to use the new port for printing.

7. (Original) The method of claim 6, further comprising indicating in the data structure, for each logical printer, the new port using the second monitor program, wherein the data structure is processed to determine the new port to assign to each logical printer.

8. (Original) The method of claim 7, wherein a separate thread is initiated to perform the operations of setting the logical printers to use the new ports as indicated in the data structure.

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9. (Original) The method of claim 6, further comprising;
determining ports associated with each logical printer that are replaced by the new port;
and
deleting, for each logical printer, all the determined ports.

10. (Currently Amended) A system for reconfiguring multiple logical printers from using a first monitor program to using a second monitor program to communicate with one physical printer, wherein the monitor ~~program submits~~ programs submit print jobs directed to a logical printer to one associated physical printer over a network, wherein at least one physical printer is capable of being associated with each logical printer, comprising:

means for determining a plurality of logical printers;

means for determining whether each physical printer associated with each of the plurality of logical printers is of a particular class;

means for indicating in a data structure each logical printer associated with one physical printer of the particular class; and

means for reconfiguring each of the plurality of logical printers indicated in the data structure to use the second monitor program to submit print jobs to one physical printer of the particular class.

11. (Original) The system of claim 10, further comprising means for determining a network address of each physical printer, wherein the means for determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

12. (Original) The system of claim 10, wherein a port object provides an interface to a physical printer, wherein each logical printer is associated with one port object to interface with one physical printer, wherein the port monitor is associated with the port object, and wherein the means for reconfiguring each of the plurality of logical printers to use the second monitor

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program comprises setting the logical printer to use one port object associated with the second port monitor to submit print jobs.

13. (Original) The system of claim 12, further comprising means for determining a network address of each physical printer by processing a name of one port object associated with the first monitor program providing the connection between the physical printer and associated logical printer, wherein the means for determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

14. (Original) The system of claim 12, further comprising:
means for determining, for each logical printer, each port object associated with the logical printer, and wherein the means for determining whether each physical printer is of a particular class comprises determining whether each physical printer associated with each determined port object is of the particular class.

15. (Original) The system of claim 12, wherein the means for reconfiguring the plurality of logical printers comprises:

means for creating a new port associated with the second monitor program for each logical printer; and

means for reconfiguring each of the logical printers indicated in the data structure to use the new port for printing.

16. (Original) The system of claim 15, further comprising means for indicating in the data structure, for each logical printer, the new port using the second monitor program, wherein the data structure is processed to determine the new port to assign to each logical printer.

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17. (Original) The system of claim 16, wherein a separate thread is initiated to perform the operations of setting the logical printers to use the new ports as indicated in the data structure.

18. (Original) The system of claim 15, further comprising:
means for determining ports associated with each logical printer that are replaced by the new port; and
means for deleting, for each logical printer, all the determined ports.

19. (Currently Amended) An article of manufacture for use in reconfiguring multiple logical printers from using a first monitor program to using a second monitor program to communicate with one physical printer, wherein the monitor ~~program submits~~ programs submit print jobs directed to a logical printer to one associated physical printer over a network, wherein at least one physical printer is capable of being associated with each logical printer, the article of manufacture comprising computer usable media including at least one computer program embedded therein that causes the computer to perform:

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determining a plurality of logical printers;
determining whether each physical printer associated with each of the plurality of logical printers is of a particular class;
indicating in a data structure each logical printer associated with one physical printer of the particular class; and
reconfiguring each of the plurality of logical printers indicated in the data structure to use the second monitor program to submit print jobs to one physical printer of the particular class.

20. (Original) The article of manufacture of claim 19, further comprising determining a network address of each physical printer, wherein determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

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21. (Original) The article of manufacture of claim 19, wherein a port object provides an interface to a physical printer, wherein each logical printer is associated with one port object to interface with one physical printer, wherein the port monitor is associated with the port object, and wherein reconfiguring each of the plurality of logical printers to use the second monitor program comprises setting the logical printer to use one port object associated with the second port monitor to submit print jobs.

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22. (Original) The article of manufacture of claim 21, further comprising determining a network address of each physical printer by processing a name of one port object associated with the first monitor program providing the connection between the physical printer and associated logical printer, wherein determining whether each physical printer is of a particular class comprises using the determined network address of each physical printer to request information from the physical printer over the network, wherein the requested information indicates whether the physical printer is a member of the particular class.

23. (Original) The article of manufacture of claim 21, further comprising:
determining, for each logical printer, each port object associated with the logical printer, and wherein determining whether each physical printer is of a particular class comprises determining whether each physical printer associated with each determined port object is of the particular class.

24. (Original) The article of manufacture of claim 21, wherein reconfiguring the plurality of logical printers comprises:
creating a new port associated with the second monitor program for each logical printer;
and
reconfiguring each of the logical printers indicated in the data structure to use the new port for printing.

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25. (Original) The article of manufacture of claim 24, further comprising indicating in the data structure, for each logical printer, the new port using the second monitor program, wherein the data structure is processed to determine the new port to assign to each logical printer.

26. (Original) The article of manufacture of claim 26, wherein a separate thread is initiated to perform the operations of setting the logical printers to use the new ports as indicated in the data structure.

27. (Original) The article of manufacture of claim 24, further comprising;
determining ports associated with each logical printer that are replaced by the new port;
and
deleting, for each logical printer, all the determined ports.
